# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/685,463 | 10/16/2003 | Tetsu Takahashi | 1614.1367 | 1888 |

21171    7590    08/29/2007
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|---|
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| ART UNIT | PAPER NUMBER |
|---|---|
| 2624 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 08/29/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after t he mailing date of this communication, even if timely filed, may re duce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on <u>7/2/2007</u>.

2a)☒ This action is **FINAL**.          2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-10* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

### *Response to Applicants Arguments*

1.      The amendment/arguments filed on 7/2/2007 has been entered and made of
record.

2.      The amendments and arguments to claims 1, 3-5 and 7-10-8 filed on 7/2/2007
with regard to the 112 second paragraph rejections have been considered the
rejection under 112 first paragraph is overcome.

3.      Re the rejection under 112 second paragraph to claims 2 and 7, applicants
arguments have been considered but are not found persuasive. Examining figure 4
of the specification the input to the MPEG encoder 10 is in ITU-R656 format not in
MPEG format. Furthermore this conclusion is supported be page 8 of the
specification.  There does not appear to be system disclosed which can accept a
MPEG compressed input stream since this figure is the only figure depicting the
system of the invention and there does not appear to be a second embodiment of
the invention. Therefore, at the very least the claim is indefinite because of
inconsistencies in the specification. To overcome this rejection applicant should
eliminate all inconsistencies in the specification and clearly show the two different
embodiments (one having a MPEG input and one having a ITU_R656 input) in the
drawings and differentiate between them in the specification, or eliminate the
unclaimed embodiment from the application. Furthermore applicant must provided a
detailed argument convince the examiner that these changes and the different

embodiments are supported by the specification, since as of right now it is not seen

how an MPEG input is properly supported.

4.    When reading the section cited in applicants response (page 14 lines 26-30)

examiner made a reasonable interpretation that the encoder was encoding the input

into IPPP format not that it was already in IPPP format. However in light applicants

arguments it appears something else was intended. Therefore due to applicant's

arguments a new rejection under 112 first paragraph is being made.

5.    Regarding the arguments with respect to the 102 rejections for claims 1-10 have

been considered but are not persuasive. Regarding the first unit examiner asserts

that sub sampling will in fact leave a first set of frames to be encoded, as the goal of

sub sampling is to leave some frames and remove others. Regarding the second

unit the second unit is describing that performing predictive coding or the first set of

frames immediately proceeding a frame from the second set of frames. Examiner

assert that corresponds exactly to what is described in Sackstien discloses where a

dummy frame is inserted by encoding the immediately preceding frame that was not

skipped as described in the cited sections. Examiner interpreters this to be exactly

what is being described in the claim language.

### Rejections Under 35 U.S.C. 112 First paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6.    Claims 2 and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. There is not a system or method which is adequately disclosed which is adequately disclosed which can accept input MPEG stream as described in applicants interpretation of claims 2 and 7 (see figure 4 note this system is not disclosed to handle input MPEG stream). Therefore one of ordinary skill in the art would not be able to make and use the invention as described my claims 2 and 7.

## Rejections Under 35 U.S.C. 112 Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7.    Claims 2 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8.      Re Claim 2 and 7, Claim 2 and 7 state: "...the second frames which are

discarded are predictive-coded pictures contained in the input video sequence."

However in applicants disclosure he describes the input as not coded in a predictive

form but in NTSC format. It is unclear how the frames discarded could be

"predictive-coded pictures" since they are not encoded by the encoder. For the

purposes of examination examiner interprets the claim to read: "...the second

frames, which are discarded, are pictures contained in the input video sequence."

### Rejections Under 35 U.S.C. 102

        The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9.      Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by

Sackstein et al. WO 98/45959

10.     Re claim 1, Sackstein discloses an image compression device comprising: an

encoding unit performing predictive coding of an input video sequence having a

plurality of frames. (See Page 3 15-20.) Note a MPEG encoder is used here.  A first

unit leaving a first set of frames (see page 3 line 8-10 the first set is the set selected

by sub sampling) at predetermined intervals (i.e. predetermined duty cycle in page 3

line 12) in the input video sequence(i.e. video signal page 3 line 11) to cause the

encoding unit (page 3 line 13) to perform predictive coding (page 3 line 16 IP

encoding is predictive) of the first frames. Note the system is sub-sampled and the

sub-sampled signal is compressed therefore a set of frames occurring at

predetermined intervals is chosen by a unit, for the purpose of predictive MPEG

coding. A second unit discarding a second set of frames (see page 3 line 8-10, the

second set is the set not selected by sub sampling), which lie between two of the

first set of frames (page 3 line 11, sub sampling implies this) in the input video

sequence(i.e. video signal page 3 line 11), to cause the encoding unit (page 3 line

13) to skip each second frame (page 3 line 8-10, sub sampling implies this) and

perform predictive coding (page 3 line 16 IP encoding is predictive) of a

corresponding one of the first frames immediately preceding the second frame (page

3 lines 17-20). Note in the removed frames are replaced by P-frames which denote

that all information is contained in the previous frame (predictive coding of a

corresponding one of the first frames immediately preceding the second frame). An

output unit (see page 5 lines 20-27 note the compressed data is stored so it must be

outputted by an output unit) outputting only encoded data (page 5 line 27 MPEG

video is encoded data) of the first set of frames created by the encoding unit in

association with the first unit as a result of the predictive coding of the entire input

video sequence (i.e. complete frame set page 3 line 23).

11.     Re claim 2 Sackstein further discloses wherein the first frames that are left are either intra-coded pictures (I-frame) or predictive-coded pictures (P-frame) (i.e. IP encoding) contained in the input video sequence (see Page 3 lines 16 and figure 1 element 50A.) The second set of frames (not selected by the sub sampling see page 3 lines 11-12), which are discarded, are pictures contained in the input video sequence (ie video signal see page 3 line 11).

12.     Re claim 3 Sackstein further discloses wherein the encoded data of the first frames created by the encoding unit is stored in a storage device (ie. Storage area page 5 line 27) having a predetermined storage capacity (All storage devices have a predetermined capacity) as a result of the predictive coding of the entire input video sequence (i.e. complete frame set see page 3 line 23).

13.     Re claim 4 Sackstein further discloses wherein the encoding unit (encoder 304 figure 3 page 19 line 15), the first unit, the second unit (controller 310 of figure 3 page 19 line 16 these two units are combined in the controller) and the output unit (multiplexer 312 figure 3 page 19 lines 16-17) are arranged in an MPEG2 (see page 1 line 19) encoder (encoding unit 300 figure 3 page 19 line 14) .

14.     Re claim 5 Sackstein discloses wherein the encoding unit (elementary stream encoder 502 figure 6 page 21 line 23-24) and the output unit (multiplexer 506 figure

6 page 21 line 23-24) are arranged in an MPEG2 (see page 1 line 19),  encoder

(elements 502 and 506 page 21 line 23-24)  and the first unit and the second unit

are arranged in an external control unit (controller 504 figure 6 page 21 line 23-24)

connected to the MPEG2 encoder.


15.    Re claim 6 Sackstein discloses an image compression method comprising the

steps of: leaving first set of frames (i.e. the frames selected by sub sampling, page 3

line11) at predetermined intervals (i.e. predetermined dutcy cycle page 3 line 12) in

an input video sequence (video signal page 3 line 11) having a plurality of frames

(this is inherent in video) to cause an encoding unit (page 3 line 13) to perform

predictive coding (page 3 line 16 IP coding is predictive) of the first set of frames.

Said encoding unit performing predictive coding of the input video sequence (See

Page 3 lines 15-20.) Discarding a second set of frames (i.e. the frames no selected

by sub sampling, page 3 line11), which lie between two frames in the first set of

frames (page 3 line 8-10, sub sampling implies this) in the input video sequence, to

cause the encoding unit to skip each second frame (i.e. some of the frames are not

compressed page 3 lines 9-10) and perform predictive coding of a corresponding

one of the first frames immediately preceding the second frame (note in page 3 lines

17-20 the removed frames are replaced by P-frames which denote that all

information is contained in the previous frame (predictive coding of a corresponding

one of the first frames immediately preceding the second frame)). Outputting (see

page 5 lines 20-27, the data is stored somewhere so it must be outputted) only

encoded data of the first set of frames (i.e. only the compressed frames page 3 lines

9-10) created by the encoding unit in association with the leaving step (subsampling

page 3 line 11) as a result of the predictive coding (IP coding page 3 line 16) of the

entire input video sequence.


16.     Re claim 7 Sackstein further discloses wherein the first frames that are left are   .

either intra-coded pictures (I-frame) or predictive-coded pictures (P-frame) (i.e. IP

encoding) contained in the input video sequence (see Page 3 lines 16 and figure 1

element 50A.) The second set of frames (not selected by the sub sampling see page

3 lines 11-12), which are discarded, are pictures contained in the input video

sequence (ie video signal see page 3 line 11).


17.     Re claim 8 Sackstein further discloses wherein the encoded data of the first

frames created by the encoding unit is stored in a storage device (ie. Storage area   .

page 5 line 27) having a predetermined storage capacity (All storage devices have a

predetermined capacity) as a result of the predictive coding of the entire input video

sequence (i.e. complete frame set see page 3 line 23).                       .


18.     Re claim 9 wherein the encoding unit (encoder 304 figure 3 page 19 line 15) is

arranged in an MPEG2 (page 1 line 19) encoder (encoding unit 300 figure 3 page 19

line 14), and the MPEG2 encoder performs the predictive coding (preformed by

encoder 304 figure 3 page 19 line 15), the leaving step, the discarding step

(preformed by the controller 310 figure 3 page 19 line 16), and the outputting step

(multiplexer 312 figure 3 page 19 lines 16-17).

19.     Re claim 10 Sackstein further discloses wherein the encoding unit (elementary

stream encoder 502 figure 6 page 21 line 23-24) is arranged in an MPEG2 encoder

so that the MPEG2 (page 1 line 19) encoder (elements 502 and 506 page 21 line

23-24) performs the predictive coding and the outputting step (multiplexer 506 figure

6 page 21 line 23-24), and an external control unit connected to the MPEG2 encoder

is arranged so that the external control unit (see figure 6 element 504 page 21 lines

23-24) performs the leaving step and the discarding step.

### *Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

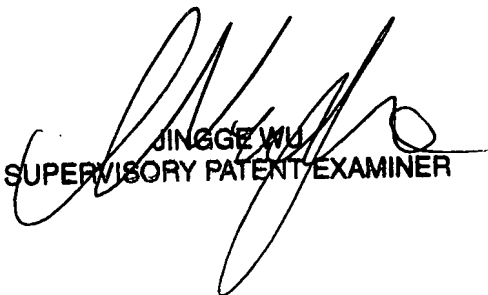than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean Motsinger whose telephone number is 571-270-1237. The examiner can normally be reached on 9-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571)272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Motsinger
8/25/2007

JINGGE WU
SUPERVISORY PATENT EXAMINER